Amendment to the Abstract:

The Abstract has been amended. A revised Abstract is attached.

The invention relates to a circuit for producing potentially separated synchronization (sync) impulses from an alternating voltage network. In a voltage divider (R1, R2) for the switch input of a semiconductor switch (T1)-which is applied to a rectified network voltage by means of a half-wave rectifier-(D1), the emitter diode (D0)-of an optical fiber coupler (DK0)-is switched to the working circuit of the switch-(T1) which is serially connected with said emitter diode-(D0) and comprises a preresistor (R3)-making it possible to periodically charge a storage capacitor (C2)-which is dischargeable by the emitter diode-(D0). At least one transistor (T2, T3)-is connected downstream of the receiving element (E0)-of the optical fiber coupler (DK0) which is powered by a voltage source (U_B) -galvanically separated from the network and whose substantially rectangular synchronization impulses (Sync)-are provided in the working circuit.

Fig.